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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,704	03/29/2002	Markus Dillinger	1454.1215	8601

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EXAMINER

AMINZAY, SHAIMA Q

ART UNIT PAPER NUMBER

2684

DATE MAILED: 08/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/030,704

Applicant(s)

DILLINGER ET AL.

Examiner

Shaima Q. Aminzay

Art Unit

2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-52 is/are pending in the application.
- 4a) Of the above claim(s) 1-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/3-29-2002.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to communications: Application Filed: 03/29/2002, PCT date: 07/04/2000, Foreign Application date: 07/13/1999.
2. Independent Claim 22, and dependent claims 23-52 are pending in the case.
3. The present title of the application is "Method For Controlling The Transmitting Power In a Radio Communications System".

NON-FINAL ACTION

Claim Rejections - 35 USC § 103

- ◆ The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- ◆ Claims 22-40, and 43-52 are rejected under 35 U.S.C.103(a) as being unpatentable over Ahmed U. S. Patent 5946346, and in view of Jiang et al. U. S. Patent 6535723 B1.

4. Regarding claims 22, 27, 36, 39, and 40, Amed teaches a method for controlling the transmitting power in a radio communications system (see for example, column 1, lines 6-9, method of controlling the transmitting power in a

radio communication system (column 1, lines 28-33)), comprising: using an inner control loop to perform fast transmitting power control of at least one of a subscriber station and a base station so as to vary power a transmitting power interval (see for example, Figures 3-4, column 6, lines 25-38 (discussed inner control loop threshold, Figure 3 (82)), and column 8, lines 37-48, Figure 4 describes Figure 3 and the fast transmitting power control using an inner control loop of a subscriber (including antenna 66, Figure 3) and a base station (including antenna 62, Figure 3) using the inner control loop (Figure 4, blocks 106-122) to perform fast transmission to a subscriber and as to vary power in a transmitting power interval), determining the transmitting power interval by the outer control loop using the outer control loop to perform slow transmitting power control in the base station (see for example, Figures 3-4, column 6, lines 57-64 (discussed outer control loop threshold, Figure 3 (86)), and column 8, lines 37-48, the transmitting power interval is determined by the outer control loop (Figure 4, blocks 124-134) using the outer control loop to perform slow transmitting power control in the base station (including antenna 62, Figure 3)).

However, Amed specifically does not teach enabling uplink from the subscriber station to the base station and downlink from the base station to the subscriber station.

Jiang teaches enabling uplink (Figure 3(240)) from the subscriber station (Figure 3(220)) to the base station (Figure 3(210)) and downlink (Figure 3(230)) from the base station to the subscriber station (see for example, Figure 3, column

5, lines 21-47).

It would have been obvious to one of ordinary skill in the art at the time invention was made to combine Jiang's uplink and downlink transmission power control (see for example, column 4, lines 20-31) with Amed's transmission power control in a radio communication system (see for example, column 1, lines 5-9, 28-33, and 4, lines 37-46) to provide a communication system with power control involved in "tracking possible fading of communication channels and using that tracked fading to manage the power at which signals are being transmitted" and "use power control to improve system performance and increase system capacity" and to solve "problems by providing a variable power control scaling factor to the mobile station" (Amed, column 1, lines 13-19, and column 3, lines 60-61).

5. Regarding claims 23, 24, 26, 43, and 45, Amed and Jiang teach claim 22, and further, Amed teaches transmitting power interval is defined by a maximum transmitting power and a minimum transmitting power and the base station signals the subscriber station with the transmitting power interval or both a maximum transmitting power and a minimum transmitting power for the signal transmission in the uplink (see for example, Figure 9, column 12, lines 5-32, the transmitting power interval highest and lowest values (maximum and minimum), and column 7, lines 44-67 continued to column 8, lines 1-5, the highest and lowest power limits and uplink transmission).
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6. Regarding claims 25, and 44, Amed and Jiang teach claim 22, 43, and further, Amed teaches the parallel connections in at least one of a common frequency band and a common timeslot are dimensioned such that a predetermined dynamic range of a receiving device of the base station is not exceeded (see for example, all the user transmit traffic on the same frequency in CDMA system (see for example, column 1, lines 18-22) and the predetermined dynamic range of a receiving device (column 7, lines 1-32, and column 8, lines 37-48).
7. Regarding claims 28, 29, and 46, Amed and Jiang teach claim 22, 45, and further, Amed teaches the transmitting power interval is dimensioned in dependence on a speed of the subscriber station (see for example, column 6, lines 18-38, and 57-64, the transmitting power interval adjustment), and the transmitting power interval is progressively reduced with increasing communication speed of the subscriber station (see for example, column 7, lines 27-31, and 19-67, transmission power and increasing communication in traffic channel).
8. Regarding claims 30, and 47, Amed and Jiang teach claim 28, 29, and further, Amed teaches the speed of the subscriber station is estimated from measurements with respect to a variation of transmission characteristics of the radio interface (see for example, column 8, lines 57-67, the estimator 210 and the subscriber communication).
9. Regarding claims 31, and 48, Amed and Jiang teach claim 30, 47, and further, Amed teaches the bit error rate, a time frame error rate, a path attenuation

interface (see for example, column 1, lines 57-62, path attenuation, and column 6, lines 1-10, lines 49-52, the time frame error and other errors).

10. Regarding claims 32, and 49, Amed and Jiang teach claim 30, 31, and further, Amed teaches the constant transmitting power by the base station is determined in the subscriber station (see for example, column 5, lines 39-42, and column 12, lines 29-30, the constant transmitting power is determined).
11. Regarding claims 33, 34, and 50, Amed and Jiang teach claim 30, 32, and further, Amed teaches the characteristic value is averaged over a particular time interval and corresponds to a periodicity of the slow transmitting power control (see for example, column 9, lines 57-62, column 10, lines 8-32, the characteristic value is averaged).
12. Regarding claims 35, 51, Amed and Jiang teach claim 30, 34, and further, Amed teaches the transmission characteristics of the radio interface determined drops below a predetermined threshold value (see for example, column 9, lines 1-8, the radio interface determined drops below the threshold value).
13. Regarding claims 37, and 52, Amed and Jiang teach claim 30, 36, and further, Amed teaches characteristic value is compared with a target characteristic value in the outer control loop and a difference between the values is calculated (see for example, column 7, lines 7-15, considering the threshold value for calculation).
14. Regarding claims 38, and 39, Amed and Jiang teach claim 37, and further, Amed teaches the weighting factor to produce a weighted difference (see for

example, column 8, lines 49-67, the weighting factor), and to the carrier signal (see for example, column 5, lines 49-51, and column 7, lines 27-33).

◆ Claims 41, and 42 are rejected under 35 U.S.C.103(a) as being unpatentable over Ahmed U. S. Patent 5946346 in view of Jiang et al. U. S. Patent 6535723 B1, and further in view of Rashid-Farrokhi U. S. Patent 6377812.

15. Regarding claims 41, and 42, Amed and Jiang teach claim 22. However, Amed and Jiang do not teach the TDD and FDD transmission.

Rashid-Farrokhi teaches the TDD and FDD transmission (see for example, column 2, lines 59-67 continued to column 3, lines 1-7).

It would have been obvious to one of ordinary skill in the art at the time invention was made to combine Rashid-Farrokhi's mobile communication system TDD and FDD functions with Jiang's uplink and downlink transmission power control (see for example, column 4, lines 20-31), and with Amed's transmission power control in a radio communication system (see for example, column 1, lines 5-9, 28-33, and 4, lines 37-46) to provide a communication system with power control involved in "tracking possible fading of communication channels and using that tracked fading to manage the power at which signals are being transmitted" and "use power control to improve system performance and increase system capacity" and to solve "problems by providing a variable power control scaling factor to the mobile station" (Amed, column 1, lines 13-19, and

column 3, lines 60-61), and to provide an improved communication system with increased users capacity (Rashid-Farrokhi's, see for example, column 17, lines 3-7).

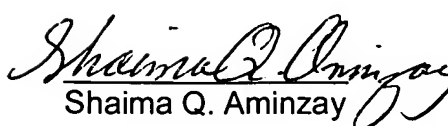
Conclusion

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892 form.


Inquiry

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shaima Q. Aminzay whose telephone number is 703-305-8723. The examiner can normally be reached on 7:00 AM -5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 703-308-7745. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Shaima Q. Aminzay
(Examiner)

July, 25, 2004


NICK CORSARO
PATENT EXAMINER

Nay Maung
(SPE)
Art Unit 2684